

EXHIBIT 7 (PART 2)

235794



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
RICHARD F. STOKES et al
Attorney Docket No. TE-4086

)
)
)
) FOR: COMPRESSOR BLEED AIR
CONTROL APPARATUS AND
METHODS

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents
& Trademarks

Phoenix, Arizona 85010

Washington, D. C. 20231

February 17, 1981

Dear Sir:

In the above-identified patent application submitted herewith for filing, please enter the following preliminary amendment.

IN THE SPECIFICATION:

Page 2, line 7, delete "leve" and insert --level--.

IN THE CLAIMS:

Claim 34, line 1, delete "compising" and insert --comprising--.

Claim 37, line 4, delete the word "the" at the end of the line; line 5, delete "." at the end of the line and insert --is selected.--.

Claim 41, line 17, delete "signas" and insert --signals--.

REMARKS

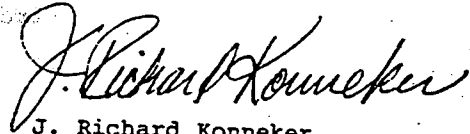
This premininary amendment is being submitted to correct minor typographical errors in the specification and claims, and to insert two inadvertently omitted words at the end of Claim 37. The necessity for each of these minor changes is believed to be readily apparent, and no new matter is being inserted into the application.

HSB 401450

TE-4086 Page 2

Moreover, this preliminary amendment is not being submitted in response to any Office Action.

Respectfully submitted,



J. Richard Konneker
Attorney for Applicants
Registration No. 28,867

JRK/dak

Tele: (602) 267-6662

HSB 401451

350
LOC-340 E
SPAT-340 E
EX-340 E

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

GROUP GROUP ART UNIT 244

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JUN 19 1981

GROUP 340

In re Application of
RICHARD F. STOKES ET AL

Serial No. 235,794

Filed: February 19, 1981

FOR: COMPRESSOR BLEED AIR
CONTROL APPARATUS AND
METHOD

NEW
COPY

DISCLOSURE STATEMENT

Hon. Commissioner of Patents
& Trademarks

Washington, D. C. 20231

Phoenix, Arizona 85010

May 27, 1981

Dear Sir:

In the course of preparation of the above-identified application, a search was conducted in the files of the U.S. Patent and Trademark Office. Enclosed are copies of references located in that search as listed in the accompanying form which is modelled after Form PTO-1449 but modified, among other reasons, to match typewritten spacing.

The relevance of these references is that they were located in the subject search and that they relate to the control of valves in various pressure regulating systems.

Written notification that these references have been considered in their entirety by return of a copy of the enclosed form, completed by the Examiner, is respectfully solicited.

Respectfully submitted,

J. Richard Konneker
J. Richard Konneker
Attorney for Applicants
Registration No. 28,867

HSB 401452

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JUN 19 1981

ATTACHMENT TO PAPER DATED May 27, 1981

GROUP 340

Sheet 1 of 1

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO.	SERIAL NO.
LIST OF DOCUMENTS SUBMITTED BY APPLICANT(S)		TE-4086	235,794
		APPLICANT	RICHARD F. STOKES ET AL
		FILING DATE	FEB. 19, 1981
		GROUP	343

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE	
✓	AA 3,364,837	1/23/68	SCHOOLING				
✓	AB 3,373,675	3/19/68	BEST				
✓	AC 3,441,045	4/29/69	MALONE				
✓	AD 3,706,270	12/19/72	FURLONG				
✓	AE 3,728,955	4.24.73	RICAUD				
✓	AF 3,842,720	10/22/74	HERR				
	AG						
	AH						
	AI						
	AJ						
	AK						

FOREIGN PATENT DOCUMENTS							
	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
	AL						
	AM						
	AN						
	AO						
	AP						

OTHER DOCUMENTS			(Including Author, Title, Date, Pertinent Pages, Etc.)
AR			
AS			

EXAMINER <i>L. F. Cooney</i>	DATE CONSIDERED <i>11/10/82</i>
---------------------------------	------------------------------------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

HSB 401453

SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NUMBER
---------------	-------------	-----------------------	------------------------

EXAMINER	
ART UNIT	PAPER NO.
	4
DATE MAILED	

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. ☒ 35 U.S.C. 153

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-492. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-646. |
| 3. <input checked="" type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449 | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-52 are pending in the application.
Of the above claims 41-52 are withdrawn from consideration.
2. ☐ Claims _____ have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 1-7, 10-16, 19-40 are rejected.
5. ☒ Claims 8, 9, 17, 18 are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.
8. ☐ Allowable subject matter having been indicated, formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. These drawings are ☐ acceptable; ☐ not acceptable (see explanation).
10. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation). Thereafter, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections **MUST** be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.
12. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received; ☐ not been received. ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other _____

PTOL-326 (REV. 3-4-21)

EXAMINER'S ACTION

USCOM-PD-82-

HSB 401454

S.N. 235,794
Art Unit 343

-2-

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-40, drawn to a compressor control apparatus, classified in Class 60, subclass 39.07.

II. Claims 41-52, drawn to a compressor control process, classified in Class 60, subclass 39.02.

The inventions of groups I and II above are distinct because the process of group II can be practiced with apparatus materially different than that of group I, and the apparatus of group I can be used in conjunction with a process materially different than that of group II (MPEP 806.05(e)).

Because the inventions are distinct for the reasons given above and require separate classification and divergent fields of search, restriction for examination purposes as indicated is proper.

During a telephone conversation on 8/27/82, applicants' representative, Mr. Konneker, elected the invention of group I (claims 1-40). The election was made with traverse. An action on the merits of elected claims 1-40 is set forth below and non-elected claims 41-52 are withdrawn from consideration.

Claims 1-5, 11-15, and 21-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his or her invention. Claims 1-5 and 11-15 recite "flow rate" as a sensed, control parameter. This limitation is inaccurate

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Art Unit 343

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and misleading since the invention, as discloses, senses pressure and not flow rate.

Claims 21-40 recite "air flow" or "flow" as the control parameter. While the intended meaning of these terms ~~are~~^{is} not entirely clear, they appear to connote "flow rate" and are deemed inaccurate for the same reasons as are claims 1-5 and 11-15.

In claims 28, 31, 34, and 37, reference to a predetermined mode of operation is vague and ambiguous.

Claims 1 and II are rejected under 35 U.S.C. 102(b) as anticipated by Metot et al because the invention was patented or described in a printed publication in this or a foreign country, more than one year prior to the date of the application for patent in the United States. Attention is called to sensor 20, error signal generator 26 and dump valve 18.

Claims 1-3, 6, 10-13, 32, 37, 39, and 40 are rejected under 35 U.S.C. 103 as being unpatentable over Shell in view of Rateau or Metot et al. Although, the invention is not identically disclosed or described as set forth in section 102 of Title 35 U.S.C., the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Shell discloses a compressor control system including surge control passage 9 with valve 10, P and Δ P sensors 3 and 11, dividing circuit 14, and controller 15.

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Art Unit 343

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Controller 15 compares the quotient from circuit 14 with set point 16; note that the controller in figure 2 has both proportional and integral action.

It is further noted that Shell's surge control outlet recycles air to the compressor inlet. Applicants' claims are not interpreted as specifically precluding this, but even if they were so interpreted, the provision for dumping instead of recycling this air is well known in the art as evidenced by Rateau and Metot.

Claim 7 is rejected like claims 1-3, 6, 10-13, etc. above and in view of Best. The pressure difference employed in the control parameter of the Shell system is taken across an orifice, however, the use of the difference between total and static pressure would be an obvious alternative since it has been applied in other similar systems. See for example, the embodiment of Figure 5 of Best; note pressure taps and 196 and 198, and note also that these taps may be located in the compressor discharge (column 8, lines 4-7). Furthermore, it is pointed out that Rateau provides an additional example of the use of total and static pressure; note elements 1 and m.

Claims 16, 19-22, 27-29, and 38 are rejected like claims 1-3, 6, 10-13, etc. above and in view of Lewis. The Shell control system is obviously applicable to any dynamic compressor including gas turbine driven compressor means such as those disclosed by Lewis. Note also that the Lewis device is intended for aircraft use and thus the addition of an attitude compensation feature to the control system would be an obvious expedient.

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Art Unit 343

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Banner and Schlirf are cited as further pertinent examples of prior art.

Claims 8, 9, 17, and 18 will be allowed if rewritten in independent form. Claims 4, 5, 14, 15, 23-26, 30, 31, and 33-36 will also be allowed if amended to overcome the rejection under 35 USC 112 and rewritten in independent form.

The prior art submitted by applicants is noted but will not be cited or fully considered because of applicants' failure to provide an appropriate "explanation of the relevance of each listed item" as required by 37 CFR 1.98(a). Applicants' broad statement that the references "relate to the control of valves in various pressure regulating systems" is not deemed an adequate explanation of relevance.

L.J.Casaregola:mlr

703 557-3464

9/13/82

L.J. Casaregola
EXAMINER
ART UNIT 343

HSB 401458

TO SEPARATE, HOLD TOP AND BOTTOM EDGES, SNAP APART AND DISCARD CARBON

FORM PTO-892 (REV. 3-78)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		SERIAL NO. 235794	GROUP/ART UNIT 343	ATTACHMENT TO PAPER NUMBER 4			
NOTICE OF REFERENCES CITED				APPLICANT'S R. Stokes et al					
U.S. PATENT DOCUMENTS									
		DOCUMENT NO.	DATE	NAME	CLASS	SUB-CLASS			
A		1052172	2/4/13	Rotaru	415	27			
B		1154954	9/24/5	Barnes	415	27			
C		2994471	8/1/61	Lewis et al	417	406			
D		3047210	7/3/62	Bost	415	27			
E		3362621	1/9/68	Schliif	415	27			
F		3411702	4/19/68	Metot et al	415	27			
G									
H									
I									
J									
K									
FOREIGN PATENT DOCUMENTS									
		DOCUMENT NO.	DATE	COUNTRY	NAME	CLASS	SUB-CLASS	PERTINENT SHTS. DWG.	PP SPEC
L		1021797	3/9/66	Gr. Brit.	Shell	415	27		
M									
N									
O									
P									
Q									
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, Etc.)									
R									
S									
T									
U									
EXAMINER L J. Connolly				DATE 8/31/82		HSB 401459			
A copy of this reference is not being furnished with this office action. (See Manual of Patent Examining Procedure, section 707.05 (a).)									



The Garrett Corporation

CASE DOCKET NO. TE-4086

THE GARRETT CORPORATION
 ATTENTION: PATENT DEPARTMENT
 111 SOUTH 34TH STREET
 P.O. BOX 5217
 PHOENIX, ARIZONA 85010

DATE: October 25, 1982IN RE APPLICATION OF: RICHARD F. STOKES et alSERIAL NO.: 235,794FILED: February 19, 1981FOR: "COMPRESSOR BLEED AIR CONTROL APPARATUS AND METHODS"

THE COMMISSIONER OF PATENTS
 & TRADEMARKS

Washington, D. C. 20231

Sir:

Transmitted herewith is an Amendment in the above-identified application.

The additional fee, if any, required because of claims added by this Amendment, is calculated below:

CLAIMS AS AMENDED							
	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NO. PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE	ADDITIONAL FEE	
TOTAL CLAIMS	23	MINUS	52	= 0	X \$10	0	
INDEP. CLAIMS	8	MINUS	9	= 0	X \$30	0	
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT						0	

* If this application was filed before October 1, 1982, and this number is less than 10, enter 10 in this space. If this application was filed on or after October 1, 1982, and this number is less than 20, enter 20 in this space.
 ** If this application was filed on or after October 1, 1982, and this number is less than 3, enter 3 in this space.

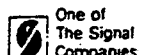
Charge the above calculated additional claim fee plus any additional fee(s) required to secure entry of this Amendment, or credit any overpayment, to The Garrett Corporation Deposit Account No. 07-0145. A duplicate copy of this sheet is provided.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail, postage paid, addressed to:
 Commissioner of Patents and Trademarks, Washington, D. C. 20231, on

OCTOBER 25, 1982
J. Richard Konneker 10/25/82
 J. Richard Konneker, Reg. 28,867 DATE

J. Richard Konneker
 J. Richard Konneker
 Attorney for Applicants
 Registration No. 28,867
 (602) 267-6662

HSB 401460



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
GROUP ART UNIT 343

EXAMINER: L. J. CASAREGOLA

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GROUP 340

In re Application of
RICHARD F. STOKES et al
Serial No. 235,794

Filed: February 19, 1981

)
) FOR: COMPRESSOR BLEED AIR
) CONTROL APPARATUS AND
) METHODS
)

AMENDMENT

Hon. Commissioner of Patents
& Trademarks

Phoenix, Arizona 85010

Washington, D. C. 20231

October 25, 1982

Dear Sir:

Responsive to the Office Action dated September 17, 1982,
please amend the above-identified application as follows:

IN THE SPECIFICATION:

On page 14, line 7, delete "sume" and insert --sum-- in place
thereof, and in line 8 delete "magnitude" and insert --magnitudes--
in place thereof.

IN THE CLAIMS:

Cancel Claims 1-3, 6, 7, 11-13, 16, 21, 22, 28, 29, 31, 32,
34, 37, and 41-52 without prejudice.

Rewrite Claims 4, 8, 14, 17, 23, 30, 33 and 35 in independent
form as follows.

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1 ~~1~~. (Amended) [The] A system [of Claim 1 wherein] for supply-
2 ing gas discharged from a compressor or the like to gas-operated
3 apparatus having a variable gas flow rate demand, the compressor
4 [has] having an inlet opening and means for variably adjusting the
5 area of such inlet opening, said system comprising:
6 (a) duct means for flowing to the gas-operated apparatus
7 gas discharged from the compressor;
8 (b) means defining a surge outlet passage from said
9 duct means;
10 (c) surge flow regulating means operable to variably
11 restrict gas flow outwardly through said surge outlet passage;
12 [said means (d) include]
13 (d) means for sensing the value of a predetermined flow-
14 related parameter within said duct means and generating an error
15 signal having a magnitude indicative of the deviation between the
16 sensed value of said parameter and a desired value thereof, said
17 sensing and generating means including comparator means for compar-
18 ing the sensed value of said parameter to a set point value thereof
19 and responsively generating said error signal [,];
20 (e) control means for utilizing said error signal to
21 operate said surge flow regulating means in a manner providing an
22 essentially constant minimum gas flow rate through said duct means
23 despite fluctuations in the flow rate of gas received by the gas-
24 operated apparatus; and [said system further comprises]
25 (f) means associated with said comparator means for vary-
26 ing said set point value of said parameter in response to variation
27 in the area of the compressor inlet opening.--

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--8.³

(Amended) [The control system of Claim 7 wherein the compressor is of a type] A control system for modulating a surge bleed valve positioned in a surge bleed outlet passage of bleed duct means adapted to receive air discharged from a compressor and supply the air to pneumatically-operated apparatus having a variable supply air demand, the compressor having adjustable inlet guide vanes, said control system comprising:

(a) means for generating an error signal indicative of the difference between the actual magnitude of a selected flow-related parameter within the bleed duct means and a desired value of said parameter, said error signal generating means including:

(1) means for sensing the difference between the total pressure and the static pressure within the bleed duct means and transmitting a first output signal indicative of the sensed pressure differential,

(2) means for sensing the total pressure within the bleed duct means and transmitting a second output signal indicative of the sensed total pressure,

(3) means for generating a sensed parameter signal having a magnitude equal to the magnitude of said first output signal divided by the magnitude of said second output signal, and

(4) comparator means for receiving said sensed parameter signal and at least one reset signal indicative of said desired value of said parameter, and for responsively generating said error signal;

(b) first control means for receiving said error signal and transmitting an output signal having a magnitude proportional to the magnitude of said error signal;

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9 (c) second control means for receiving said error
0 signal and transmitting an output signal having a magnitude
1 representing the integral, as a function of time, of the magni-
2 tude of said error signal; [and]

3 (d) means for simultaneously utilizing said output
4 signals from said first and second control means to modulate the
5 surge bleed valve in a manner assuring that the minimum air flow
6 rate through the bleed duct means is of a substantially constant,
7 predetermined magnitude regardless of the supply air demand of
8 the pneumatically-operated apparatus; and [said control system
9 further comprises]

0 (e) guide vane position sensor means for transmitting
1 said reset signal to said comparator means, said reset signal
2 varying as a function of the position of the inlet guide vanes
3 according to a predetermined reset schedule.--

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--14. ⁶ (Amended) [The control apparatus of Claim 13 further comprising] For use with an air supply system for pneumatically-powered apparatus having a variable supply air demand, the system including a supply duct interconnected between a compressor and the pneumatically-powered apparatus and having a surge outlet passage in which is positioned a surge bleed valve, control apparatus for modulating the valve comprising:

(a) means, responsive to a variation in the flow rate of compressor discharge air through the supply duct, for producing an error signal having a magnitude indicative of the degree of deviation, from a desired minimum flow rate, of the actual flow rate through the supply duct;

(b) control means for utilizing said error signal to modulate the surge bleed valve in a manner such that, subsequent to an initial opening of the valve, the air flow rate through the supply duct remains substantially constant regardless of the degree to which the valve is further opened, whereby the valve is controlled along an operating line substantially parallel to a surge line of the compressor, said control means including means for receiving said error signal and responsively transmitting to the surge valve a control signal whose magnitude has, relative to the magnitude of said error signal, both a proportional component and a time-integral component, said means for receiving said error signal including a proportional controller, an integral controller and a summer, said proportional and integral controllers being coupled in parallel between said error signal-producing means (a) and said summer, said summer having an outlet coupled to the surge valve; and

(c) means for automatically deleting said time-integral component from said control signal while said error signal exceeds a predetermined magnitude.

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⁸
 --17. (Amended) [The accessory power unit of Claim 16 where-
 in said compressor has] A gas turbine engine accessory power unit
having a fluctuating compressed air supply demand, said accessory
power unit comprising:

(a) a compressor having adjustable inlet guide vanes[,];

(b) duct means for receiving compressed air discharged
from said compressor and supplying the received air to the
pneumatically-powered apparatus;

(c) surge bleed means operable to exhaust from said
 0 duct means a selectively variable quantity of air to assure at
 1 least a predetermined minimum flow rate through said duct means and
 2 thereby prevent surge of said compressor;

(d) sensing means for sensing the value of a pre-
 3 determined, flow-related parameter within said duct means and
 4 generating an output signal indicative of said value, [the] said
 5 value of said flow-related parameter [is] being substantially
 6 independent of the temperature of the compressed air[,];

(e) comparator means for receiving said sensing means
 7 output signal and generating an error signal representing the
 8 difference between the sensed value of said parameter and a
 9 desired value thereof, said comparator means [have] having an
 0 adjustable control set point representing said desired value of
 1 said parameter [, and said accessory power unit further comprises];

(f) means for transmitting to said comparator means
 2 a reset signal for varying said set point as a function of the
 3 position of said inlet guide vanes in accordance with a predeter-
 4 mined reset schedule; and

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3 [(f)][g] control means for receiving said error
 9 signal and transmitting to said surge bleed means a control signal
 5 to operate said surge bleed means, the magnitude of said control
 1 signal having, relative to the magnitude of said error signal,
 2 a proportional component and an integral component,
 3 whereby said minimum flow rate through said
 4 duct means is essentially constant regard-
 5 less of the compressed air supply demand
 6 of the pneumatically-powered apparatus.--

--23. (Amended) [The device of Claim 22 wherein said com-
 pressor means include] A gas turbine engine device comprising:
 (a) drivable compressor means for receiving,
 4.1. compressing, and discharging air, said compressor means having adjust-
able [compressor] inlet guide vanes[.];

(b) combustor means for receiving compressed air dis-
charged by said compressor means, mixing the received air with
fuel, burning the fuel-air mixture, and discharging the resultant
expanded gas;

0 (c) turbine means, positioned to be operated by the
 1 expanded gas discharged from said combustor means, for driving said
 2 compressor means and creating a power output from said gas turbine
 3 device;

4 (d) a bleed air system including:

5 (1) main bleed duct means for receiving air
 6 discharged from said compressor means, said main bleed duct means
 7 having a branch supply portion for flowing compressed air to
 8 pneumatically-operated apparatus having a fluctuating compressed
 9 air supply demand, said main bleed duct means further having a
 0 surge bleed outlet portion for exhausting air from said main bleed
 1 duct means,

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2 (2) flow regulating means operable to vary the
3 flow rate of air exhausted through said surge bleed output portion
4 of said main bleed duct means, and
5 (3) surge bleed control means for operating said
6 flow regulating means to assure an essentially constant minimum
7 air flow rate through said main bleed duct means despite fluctu-
8 ations in the air flow rate through said branch supply portion of
9 said main bleed duct means, said surge bleed control means being
0 responsive to variations in air flow through said main bleed duct
1 means and including means for integrally and proportionally con-
2 trolling said flow regulating means, said surge bleed control means
3 further including means for sensing a predetermined, flow-related
4 parameter within said main bleed duct means and generating an output
5 signal indicative of the sensed value of said parameter, comparator
6 means for receiving said sensing means output signal and generating
7 an error signal indicative of the variation between the actual
8 magnitude of said sensing means output signal and a desired set
9 point value thereof, said means for integrally and proportionally
0 controlling said flow regulating means including means for receiv-
1 ing said error signal and converting the same to a control signal
2 whose magnitude, relative to the magnitude of said error signal,
3 has both a proportional and a time-integral component; and [said
4 device further comprises]

5 (e) means, connected between said inlet guide vanes
6 and said comparator means, for varying said set point value as a
7 function of the position of said inlet guide vanes.--

HSB 401468

SERIAL NO. 235,794 Page 9

--¹⁷36. (Amended) [The device of Claim 29 wherein] A gas

turbine engine device comprising:

(a) drivable compressor means for receiving, compressing and discharging air;

(b) combustor means for receiving compressed air discharged by said compressor means, mixing the received air with fuel, burning the fuel-air mixture, and discharging the resultant expanded gas;

(c) turbine means, positioned to be operated by the expanded gas discharged from said combustor means, for driving said compressor means and creating a power output from said gas turbine device; and

(d) a bleed air system including;

(1) main bleed duct means for receiving air discharged from said compressor means, said main bleed duct means having a branch supply portion for flowing compressed air to pneumatically-operated apparatus having a fluctuating compressed air supply demand, said main bleed duct means further having a surge bleed outlet portion for exhausting air from said main bleed duct means,

(2) flow regulating means operable to vary the flow rate of air exhausted through said surge bleed output portion of said main bleed duct means, said flow regulating means [include] including a normally open surge bleed valve, and

(3) surge bleed control means for operating said flow regulating means to assure an essentially constant minimum air flow rate through said main bleed duct means despite fluctuations in the air flow rate through said branch supply portion of said

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9 main bleed duct means, said surge bleed control means being
0 responsive to variations in air flow through said main bleed duct
1 means and including means for integrally and proportionally con-
2 trolling said flow regulating means, said surge bleed control
3 means further including proportional controller means for receiving
4 said error signal and generating a first output signal, integral
5 controller means for receiving said error signal and generating
6 a second output signal, and means for simultaneously utilizing
7 the first and second output signals to operate said flow regu-
8 lating means, said surge bleed control means further [include]
9 including means for deactivating said integral controller means
0 during periods when said error signal exceeds a predetermined
1 magnitude.--

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--¹⁸33. (Amended) [The control system of Claim 32 further comprising] A control system for assuring a substantially constant minimum flow rate through a duct receiving air discharged from a compressor or the like, the duct having a supply outlet connected to pneumatically-operated apparatus having a variable supply air demand, the duct further having an exhaust outlet, said control system comprising:

(a) a flow regulating device adapted to be positioned in the exhaust outlet and operable to selectively vary air flow outwardly therethrough;

(b) a sensing device having a sensing portion adapted to be positioned in the duct to sense therein a predetermined parameter related to the air flow rate through the duct, said flow sensing device further having an output portion;

(c) an adjustable set point comparator having an input portion coupled to said output portion of said sensing device, and an output adapted to generate an error signal;

(d) a proportional controller having an inlet coupled to said outlet of said comparator and further having an outlet;

(e) an integral controller having an inlet coupled to said outlet of said comparator and further having an ^{outlet} inlet;

(f) a summer having a first inlet coupled to said outlet of said proportional controller, a second inlet coupled to said outlet of said integral controller, and an outlet coupled to said flow regulating device; and

(g) a kicker connected between said outlet of said comparator and said integral controller to deactivate said integral controller when said error signal reaches a predetermined magnitude.--

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19. (Amended) [The control system of Claim 32 wherein the compressor has] A control system for assuring a substantially constant minimum flow rate through a duct receiving air discharged from a compressor or the like having adjustable inlet guide vanes, the duct having a supply outlet connected to pneumatically-operated apparatus having a variable supply air demand, the duct further having an exhaust outlet, said control system comprising:

(a) a flow regulating device adapted to be positioned in the exhaust outlet and operable to selectively vary air flow outwardly therethrough;

(b) a sensing device having a sensing portion adapted to be positioned in the duct to sense therein a predetermined parameter related to the air flow rate through the duct, said sensing device further having an output portion;

(c) an adjustable set point comparator having an input portion coupled to said output portion of said sensing device, and an outlet adapted to generate an error signal;

(d) a proportional controller having an inlet coupled to said outlet of said comparator and further having an outlet;

(e) an integral controller having an inlet coupled to said outlet of said comparator and further having an inlet; ^{outlet} 4.7C.

(f) a summer having a first inlet coupled to said outlet of said proportional controller, a second inlet coupled to said outlet of said integral controller, and an outlet coupled to said flow regulating device; and [said control system further comprises]

(g) a guide vane position sensor and a function generator coupled in series between the inlet guide vanes and said input portion of said comparator.--

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Change the dependency of Claims 10, 19, 20, 27, 38, 39, and 40 as follows:

In Claim 10, line 1, delete "6" and insert --8-- in place thereof, and delete "element" and insert --elements-- in place thereof.

In Claim 19, line 1, delete "16" and insert --17-- in place thereof.

In Claim 20, line 1, delete "16" and insert --17-- in place thereof.

In Claim 27, line 1, delete "21" and insert --23-- in place thereof.

In Claim 38, line 1, delete "32" and insert --35-- in place thereof.

In Claim 39, line 1, delete "32" and insert --35-- in place thereof, and delete the word "flow".

In Claim 40, line 1, delete "32" and insert --35-- in place thereof.

REMARKS

Reconsideration of this application, as amended herein, is respectfully requested.

Claims 1-52 were originally presented for consideration in this application. Claims 41-52 have been withdrawn from consideration and are now the subject of a divisional application (serial number not yet received) filed pursuant to 37 CFR 1.60 on September 27, 1982. Accordingly, Claims 41-52 have been cancelled without prejudice in the instant application.

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In his September 17, 1982 Office Action the Examiner rejected Claims 1 and 11 under 35 U.S.C. 102, and rejected Claims 1-3, 6, 7, 10-13, 16, 19-22, 27-29, 32, 37, 38, 39 and 40 under 35 U.S.C. 103. Claims 28, 31, 34 and 37 stand rejected under 35 U.S.C. 112 due to their recitation of the phrase "predetermined mode of operation". By the present amendment Claims 1-3, 6, 7, 11-13, 16, 21, 22, 28, 29, 31, 32, 34 and 37 have been cancelled without prejudice.

The Examiner has also indicated that Claims 8, 9, 17 and 18 would be allowable if rewritten in independent form, and that Claims 4, 5, 14, 15, 23-26, 30, 31 and 33-36 would also be allowable if rewritten in independent form and amended to overcome certain 35 U.S.C. 112 rejections. By the present amendment Claims 4, 8, 14, 17, 23, 30, 33 and 35 have been rewritten in independent form, and Claims 10, 19, 20, 27, 38, 39 and 40 have been amended to make them dependent from one of these rewritten, allowable claims. Claims 5, 9, 15, 18, 24, 25, 26, and 36, in their originally submitted form, already depend from one of these rewritten claims.

Relative to the remaining 35 U.S.C. 112 rejections, Claims 1-5 and 11-15 were rejected on such basis because of their recitation of "flow rate" as a sensed parameter. In response to this rejection, the phrase "means for sensing the gas flow rate through said duct means and generating an error signal having a magnitude indicative of the deviation between the sensed flow rate and a desired value thereof" in Claim 1 (now directly incorporated in rewritten Claim 4) has been changed to "means for sensing the value of a predetermined flow-related parameter within said duct

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means and generating an error signal having a magnitude indicative of the deviation between the sensed value of said parameter and a desired value."

This modification is seen to clearly overcome the Examiner's 35 U.S.C. 112 rejection of Claim 4, and Claim 5 which depends therefrom. Specifically, this modification more particularly specifies that while it is the flow rate through the duct means which is ultimately controlled, it is a flow-related parameter (i.e. $\frac{P_t - P_s}{P_t}$) which is actually sensed within the duct means.

In contrast, Claim 11 (now directly incorporated in rewritten Claim 14) contained no recitation that anything whatever is "sensed" within the supply duct interconnected between the compressor and the pneumatically-powered apparatus. Thus, the Examiner's objection to the term "flow rate" as a sensed parameter in Claims 11-15 is incorrect. As rewritten, Claim 14 now recites "means, responsive to a variation in the flow rate of compressor discharge air through the supply duct, for producing an error signal" Further, Claim 14 specifies control means for utilizing the error signal to modulate the surge bleed valve in a manner maintaining the air flow rate through the supply duct essentially constant.

Stated otherwise, while the control apparatus of Claim 14 controls the recited air flow rate, no specific mention is made of any "sensed" parameter used to effect such control. Accordingly, the term "flow rate" in rewritten Claim 14 is neither vague, ambiguous, nor a sensed control parameter and Claim 14, and Claim 15 which depends therefrom, are thus seen to be in a condition for allowance over the Examiner's 35 U.S.C. 112 rejection thereof.

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Claims 21-40 were also rejected under 35 U.S.C. 112 on the basis that, in the Examiner's words, these claims "recite 'air flow' or 'flow' as the control parameter. While the intended meanings of these terms are not entirely clear, they appear to connote 'flow rate' and are deemed inaccurate for the same reasons as are Claims 1-5 and 11-15."

In response to this 35 U.S.C. 112 rejection, the following amendments have been made to rewritten independent Claims 23 and 35:

1. In Claim 23 the phrase "means for sensing the air flow through said main bleed duct means and generating an output signal indicative of the sensed flow rate" has been changed to "means for sensing a predetermined, flow-related parameter within said main bleed duct means and generating an output signal indicative of the sensed value of said parameter." Claim 23 now more clearly distinguishes between what is ultimately controlled (the air flow rate through the main bleed duct means) and what is actually sensed (a flow-related parameter with such duct means, such as the disclosed $\frac{P_t - P_s}{P_t}$). This amendment of Claim 23 is seen to clearly place such claim, and Claims 24-27 which depend therefrom, in a condition for allowance over the Examiner's 35 U.S.C. 112 rejection thereof.

2. In Claims 33 and 35 the phrase "a flow sensing device having a sensing portion adapted to be positioned in the duct" has been changed to "a sensing device having a sensing portion adapted to be positioned in the duct to sense therein a predetermined parameter related to the air flow rate through the duct." This modification is seen to more clearly indicate that a flow-related parameter is actually sensed - not the actual flow rate.

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Accordingly, Claims 33 and 35, and Claims 36 and 38-40 which depend from Claim 35, are now seen to be allowable over the Examiner's 35 U.S.C. 112 rejection thereof.

Rewritten Claim 30 does not specify the sensing of either "flow rate" or "flow" within the duct means. Accordingly, Claim 30 is seen to be allowable over the Examiner's 35 U.S.C. 112 rejection without amendment for the reasons set forth above relative to rewritten Claim 14.

In summary, all of the claims rejected by the Examiner in his September 17, 1982 Office Action have been cancelled without prejudice. All of the claims which he indicated would be allowable if rewritten in independent form have either been rewritten in independent form or depend from one of such rewritten claims. Appropriate amendments have been made to clearly overcome the 35 U.S.C. 112 rejections of certain of the claims. Additionally, two amendments have been made to the specification to correct minor typographical errors therein.

In view of the amendments made herein, and the foregoing remarks, all of the claims remaining in this application are seen to be allowable and such action is respectfully requested.

The Examiner has noted that the patents submitted with Applicants' May 27, 1981 Disclosure Statement have been noted, but will not be cited or fully considered because of, in the Examiner's words, "applicants' failure to provide an appropriate 'explanation of the relevance of each listed item' as required by 37 CFR 1.98(a)." Set forth below, in a manner specifically authorized by M.P.E.P. 609, is a "concise explanation of the relevance of each listed item "

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as required by 37 CFR 1.98(a). In view of this listing, the Examiner is again requested to give written notification, on the form submitted on May 27, 1981, that these references have been considered in their entirety.

U.S. PATENT NUMBER

RELEVANT DRAWING FIGS.

3,364,837

Fig. 2

3,373,675

Figs. 1, 2

3,441,045

Fig. 1

3,706,270

The single figure

3,728,955

Figs. 1, 2, 3

3,842,720

Fig. 2

The Examiner is authorized to telephone the undersigned Attorney collect if such would further or expedite prosecution of this application.

Respectfully submitted,

J. Richard Konneker

J. Richard Konneker
Attorney for Applicants
Registration No. 28,867

JRK/dak

Telephone: (602) 267-6662

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail and is being sent to:

Comptroller of the Patent Office, Washington, D.C.

on **OCTOBER 25, 1982**

J. Richard Konneker 10/25/82
J. Richard Konneker, Reg. 28,867 DATE

HSB 401478

EXAMINER	
ART UNIT	PAPER NUMBER
ART UNIT	6
DATE MAILED:	

This is a communication from the examiner in charge of your application.
 COMMISSIONER OF PATENTS AND TRADEMARKS

1. ☐ THIS IS AN ATTACHMENT TO THE NOTICE OF ALLOWANCE AND BASE ISSUE FEE DUE, PTOL 85.
2. ☒ All the claims being allowable, PROSECUTION ON THE MERITS IS CLOSED in this application. If not attached hereto, a Notice of Allowance or other appropriate communication will be sent in due course.
 - A. ☐ Note the attached PTO-152, Notice of Informality, which indicates that the declaration (or oath) is deficient and that a substitute is required. The substitute declaration (or oath) MUST BE SUBMITTED WITHIN THE THREE MONTH STATUTORY PERIOD SET FOR PAYMENT OF THE BASE ISSUE FEE IN THE "NOTICE OF ALLOWANCE AND BASE ISSUE FEE DUE" (PTOL-85). It must be submitted with and attached to the base issue fee. Note that the statute does not permit extension of the three month period set for payment of the base issue fee. Failure to timely file the substitute declaration (or oath) will result in ABANDONMENT of the application. The transmittal letter accompanying the declaration (or oath) should indicate the following in the upper right hand corner:
 Issue Batch Number:
 Date of the Notice of Allowance:
 Serial Number:
 - B. ☐ Formal drawings are now required and MUST BE SUBMITTED WITHIN THE THREE MONTH STATUTORY PERIOD SET FOR PAYMENT OF THE BASE ISSUE FEE IN THE "NOTICE OF ALLOWANCE AND BASE ISSUE FEE DUE" (PTOL-85). Note that the statute does not permit extension of the three month period set to pay the base issue fee. Failure to timely submit the drawing will result in ABANDONMENT of the application. The drawings should be submitted as a separate paper with a transmittal letter which is addressed to the Official Examiner and which indicates the following in the upper right hand corner:
 Issue Batch Number:
 Date of the Notice of Allowance:
 Serial Number:
 - C. ☒ The claims are allowed in view of:
 - a. ☒ Applicant's communication filed 10/27/82
 - b. ☐ The interview summarized on the attached EXAMINER INTERVIEW SUMMARY RECORD, PTOL-413.
 - c. ☐ The Examiner's Amendment, attached. Should the changes and/or additions be unacceptable to applicant, an appropriate amendment may be proposed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, MUST be submitted before, or with, payment of the Base Issue Fee.
 - d. ☐ An Examiner's Amendment which will follow in due course.
 - D. ☐ The allowed claims are _____
3. ☐ Note the attached Examiners Statement of Reasons for Allowance. Any comments considered necessary by applicant regarding the reasons for allowance must be submitted no later than the payment of the Base Issue Fee, preferably with it, to avoid processing delays. Such comments should be clearly labeled, "Comments on Statement of Reasons for Allowance".
4. ☐ Note attached NOTICE OF REFERENCES CITED, PTO-892, which is part of this communication. The listed references are considered pertinent to the claimed invention, but the claims are deemed to be patentable thereover.
5. ☒ Note attached LIST OF ART CITED BY APPLICANT, PTO-1449, which is part of this communication and serves as an acknowledgment of receipt of applicant's prior art statement. The references which were considered have been initialed on the form by the examiner, and the claims are deemed patentable thereover.
6. ☐ The drawings filed on _____ are acceptable as filed. ☐ are acceptable subject to correction as indicated on the attached Notice re Drawings, PTO-948. In order to avoid ABANDONMENT of this application, correction is required. Corrections can only be made in accordance with the instructions set forth in the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES".
7. ☐ The ☐ proposed drawing correction and/or the ☐ proposed additional or substitute sheet(s) of drawings filed on _____ has (have) been approved by the examiner. Applicant is reminded that in order to avoid abandonment of this application, execution of the proposed changes or submission of additional or substitute drawings MUST be made in accordance with the instructions set forth in the letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", attached to Paper No. _____.
8. ☐ The proposed drawing correction, filed _____, has been approved. However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections are required and MUST be effected in accordance with the instructions set forth in the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES".
9. ☐ In order to avoid ABANDONMENT, the drawing information noted on the Notice re Drawing, PTO-948, attached to Paper No. _____, must now be corrected. Applicant is reminded that the corrections can only be made in accordance with the instructions set forth in the letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES" attached to the PTO-948.
10. ☐ Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has: ☐ been received, ☐ not been received.
☐ been filed in parent application, Serial No. _____ filed on _____

L. J. Casaregola

J. CASAREGOLA
 EXAMINER
 ART UNIT 343

HSB 401479

PTOL-85 (Rev. 8-87)


**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

 Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

**NOTICE OF ALLOWANCE
AND ISSUE FEE DUE**

 THE GARRETT CORP.
PAT. DEPARTMENT 64/301-1
111 SOUTH 34TH ST.
P. O. BOX 5217
PHOENIX, AZ 85010

All communications regarding this application should give the serial number, date of filing, name of applicant, and batch number.

Please direct all communications to the Attention of "OFFICE OF PUBLICATIONS" unless advised to the contrary.

The application identified below has been examined and found allowable for issuance of Letters Patent. PROSECUTION ON THE MERITS IS CLOSED.

SC/SERIAL NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
06/235,794	02/19/81	023	CASAREGOLA, L	11/18/82
First Named Applicant	STOKES,	RICHARD F.	343	
TITLE OF INVENTION	COMPRESSOR BLEED AIR CONTROL APPARATUS AND METHOD			

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
TE-4086	060-039.007	N42	UTILITY	NO	\$500.00	02/18/83

HSB 401480

The amount of the issue fee is specified by 37 C.F.R. 1.18 as follows: for an original or reissue patent, except for a design or plant patent, \$500; for a design patent, \$175; and for a plant patent, \$250. If the applicant qualifies for and has filed a verified statement of small entity status in accordance with 37 C.F.R. 1.27, the issue fee is one-half the respective amount aforementioned. The issue fee due printed above reflects applicant's status as of the time of mailing this notice. A verified statement of small entity status may be filed prior to or with payment of the issue fee. However, in accordance with 37 C.F.R. 1.28, failure to establish status as a small entity prior to or with payment of the issue fee precludes payment of the issue fee in the amount so established for small entities and precludes a refund of any portion thereof paid prior to establishing status as a small entity.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE as indicated above. The application shall otherwise be regarded as ABANDONED. The issue fee will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the Patent and Trademark Office. Where an authorization to charge the issue fee to a deposit account has been filed before the mailing of the notice of allowance, the issue fee is charged to the deposit account at the time of mailing of this notice in accordance with 37 C.F.R. 1.311. If the issue fee has been so charged, it is indicated above. In order to minimize delays in the issuance of a patent based on this application, this Notice may have been mailed prior to completion of final processing. The nature and/or extent of the remaining revision or processing requirements may cause slight delays of the patent. In addition, if prosecution is to be reopened, this Notice of Allowance will be vacated and the appropriate Office action will follow in due course. If the issue fee has already been paid and prosecution is reopened, the applicant may request a refund or request that the fee be credited to a Deposit Account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a Deposit Account.

In the case of each patent issuing without an assignment, the complete post office address of the inventor(s) will be printed in the patent heading and in the Official Gazette. If the inventor's address is now different from the address which appears in the application, please fill in the information in the spaces provided on PTOL-85b enclosed. If there are address changes for more than two inventors, enter the additional addresses on the reverse side of the PTOL-85b.

The appropriate spaces in the ASSIGNMENT DATA section of PTOL-85b must be completed in all cases. If it is desired to have the patent issue to an assignee, an assignment must have been previously submitted to the Patent and Trademark Office or must be submitted not later than the date of payment of the issue fee as required by 37 C.F.R. 1.334. Where there is an assignment, the assignee's name and address must be provided on the PTOL-85b to ensure its inclusion in the printed patent.

Advance orders for 10 or more printed copies of the prospective patent can be made by completing the information in Section 4 of PTOL-85b and submitting payment therefor. If use of a Deposit Account is being authorized for payment, PTOL-85c should also be forwarded. The order must be for at least 10 copies and must accompany the issue fee. The copies ordered will be sent only to the address specified in section 1 or 1A of PTOL-85b.

☐ Note attached communication from Examiner.

☐ This notice is issued in view of applicant's communication filed _____

IMPORTANT

ATTENTION IS DIRECTED TO 37 C.F.R. 1.334

THE PATENT WILL ISSUE TO APPLICANT UNLESS AN ASSIGNEE IS SHOWN IN ITEM 3 ON FORM PTOL-85b, ATTACHED

PATENT AND TRADEMARK OFFICE COPY

PTOL-85 (Rev. 8-82)

ISSUE FEE TRANSMITTAL

U.S. Department of Commerce
Patent and Trademark Office

This form is provided in lieu of a formal transmittal and should be used for transmitting the Issue Fee. Sections 1A through 4 must be completed as appropriate.

INVENTOR(S) ADDRESS CHANGE - SC/SERIAL NO.

INVENTOR'S NAME

Street Address

City, State and Zip Code

CO-INVENTOR'S NAME

Street Address

City, State and Zip Code

☐ Check if additional changes are on reverse side.

MAILING INSTRUCTIONS

All further correspondence including the Issue Fee Receipt the Patent, and advanced orders will be mailed to the addressee entered in section 1 on PTOL-85c, unless you direct otherwise by specifying the appropriate name and address in 1A below.

2A. The COMMISSIONER OF PATENTS AND TRADE-MARKS is requested to apply the Issue Fee to the application identified below.

J. Richard Konneker
(Signature of party in interest of record)

J. RICHARD KONNEKER

REG. NO. 28,867

(Date)

12/18/83

Note: The Issue Fee will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the Patent and Trademark Office.

SC/SERIAL NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
06/235,794	07/12/81	023	CASAREGOLA	11/18/83

First
Named
Applicant

STOKES

RICHARD F.

TITLE OF
INVENTION

COMPRESSOR BLEED AIR CONTROL METHOD AND APPARATUS

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
11-1086	000-0.19.000	010	UTILITY	NO	4,000.00	01/18/84

A. Further correspondence to be mailed to the following:

J. RICHARD KONNEKER/G4/301-1S
THE GARRETT CORPORATION
P.O. BOX 5217
PHOENIX, ARIZONA 85010

2B. For printing on the patent front page, list the names of not more than 3 registered patent attorneys or agents OR, alternatively, the name of a firm having as a member a registered attorney or agent. If no name is listed, no name will be printed.

1 J. RICHARD KONNEKER
2 ALBERT J. MILLER
3

DO NOT USE THIS SPACE

55502 01/25/83 285794
13503 01/25/83 28579407-145 1 14
07-0145 1 501500.000P
14.000P

ASSIGNMENT DATA (print or type)

- (1) ☐ This application is NOT assigned.
 (2) ☒ Assignment previously submitted to the Patent and Trademark Office.
 (3) ☐ Assignment submitted herewith.

For Printing On The Patent: (Unless an assignee is identified below, no assignee data will appear on the patent. Inclusion of assignee data below is only appropriate when an assignment has been previously submitted to the PTO or is submitted herewith. Completion of this form is NOT a substitute for filing of an assignment as required by 37 C.F.R. 1.334).

(1) NAME OF ASSIGNEE:

THE GARRETT CORPORATION

(2) ADDRESS: (City & State or Country)

LOS ANGELES, CALIFORNIA

(3) STATE OF INCORPORATION, IF ASSIGNEE IS A CORPORATION:

CALIFORNIA

4. The following fees are enclosed:

- ☐ Issue fee ☐ Advanced order ☐ Assignment recording

The following fees should be charged to

deposit acc. no. 07-0145
(PTOL-85c or additional copy of PTOL-85b must be enclosed)

- ☒ Issue fee
☒ Advanced order
☐ Assignment recording

Number of advanced order copies requested: 14
(must be for 10 or more copies)

TRANSMIT THIS FORM WITH FEE

HSB 401481



The Garrett Corporation

111 So. 34th St.
P.O. Box 5217
Phoenix
Arizona 85010
602-267-6291

January 18, 1983

Hon. Commissioner of Patents
& Trademarks

Washington, D.C. 20231

Attention: OFFICE OF PUBLICATIONS

Re: Serial No. 235,794
For: COMPRESSOR BLEED AIR CONTROL APPARATUS &
Inventor: STOKES et al METHOD
Batch No. N42

Subject: 1. Partial Blanket Deposit Account
Authorization
2. Issue Fee Transmittal

Dear Sir:

Enclosed herewith are executed ISSUE FEE Transmittal Forms PTOL-85b and 85c for the above-identified case, including deposit account authorization for payment of the issue fee and for the advance order of patent copies.

Blanket authorization is hereby given to charge to Deposit Account No. 07-0145 any and all unpaid fees which may be necessary to secure issuance of the above case, whether or not previously authorized.

Very truly yours,

THE GARRETT CORPORATION

J. Richard Konneker
Attorney for Applicants

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Commissioner of Patents and Trademarks, Wash-

ington, D. C. 20231, on JANUARY 18, 1983

J. Richard Konneker, Reg. 28,867 DATE

Enclosures

cc: Garrett Deposit Account Records

HSB 401482

One of
The Signal
Companies

FORM PTO-875 (REV. 11-97)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		SERIAL NUMBER 235,794		FILING DATE 02-19-81	
PATENT APPLICATION FEE DETERMINATION RECORD				APPLICANT (First Named Only) Richard F Stokes			
CLAIMS AS FILED - PART I							
	(1) FOR	(2) NUMBER FILED	(3) NUMBER FILED	(4) RATE	(5) BASIC FEE \$65.00		
	TOTAL CLAIMS	52 - 10 =	42 =	x \$2.00	84.00		
	INDEPENDENT CLAIMS	9 - 1 =	8 =	x \$10.00	80.00		
				TOTAL FILING FEE	229.00		
CLAIMS AS AMENDED - PART II							
AMENDMENT	(1)	(2) CLAIMS REMAINING AFTER AMENDMENT	(3)	(4) HIGHEST NO. PREVIOUSLY PAID FOR	(5) PRESENT EXTRA	(6) RATE	(7) ADDITIONAL FEE
	TOTAL	*	MINUS	**	=	x \$2	-
	INDEP.	*	MINUS		=	x \$10	-
					TOTAL ADDITIONAL FEE FOR THIS AMENDMENT		
AMENDMENT	TOTAL	*	MINUS	**	=	x \$2	-
	INDEP.	*	MINUS		=	x \$10	-
					TOTAL ADDITIONAL FEE FOR THIS AMENDMENT		
					TOTAL ADDITIONAL FEE FOR THIS AMENDMENT		
AMENDMENT	TOTAL	*	MINUS	**	=	x \$2	-
	INDEP.	*	MINUS		=	x \$10	-
					TOTAL ADDITIONAL FEE FOR THIS AMENDMENT		
					TOTAL ADDITIONAL FEE FOR THIS AMENDMENT		
AMENDMENT	TOTAL	*	MINUS	**	=	x \$2	-
	INDEP.	*	MINUS	**	=	x \$10	-
					TOTAL ADDITIONAL FEE FOR THIS AMENDMENT		
					TOTAL ADDITIONAL FEE FOR THIS AMENDMENT		
<p>If the entry in Column 2 is less than the entry in Column 4, write "0" in Column 5.</p> <p>If the "Highest Number Previously Paid For" IN THIS SPACE is less than 10, write "10" in this space.</p> <p>The "Highest Number Previously Paid For" ("Total" or "Indep.") is the highest number found in the appropriate box in Column 2.</p>							

HSB 401483

USCOMM-11 10-7-81

[illegible]



UTILITY

23579

U. NUMBER
35,794

HA

SEARCHED

Class	Sub	Date	Ex'r
20	39.07	8/31/82	
	39.24		
45	27		
	28		
47	405		
	906		
50	39.27		
50	39.07	11/8/82	LAC
5-	27		LAC

Update

PRINT CLAIM(S):

INDEX OF CLAIMS

Claim		Date		Claim		Date	
Final	Original			Final	Original		
1	8			26	8		
2	12			27	8		
3	12			28	8		
4	12			29	8		
5	12			30	8		
6	12			31	8		
7	12			32	8		
8	12			33	8		
9	12			34	8		
10	12			35	8		
11	12			36	8		
12	12			37	8		
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14	12			39	8		
15	12			40	8		
16	12			41	8		
17	12			42	8		
18	12			43	8		
19	12			44	8		
20	12			45	8		
21	12			46	8		
22	12			47	8		
23	12			48	8		
24	12			49	8		
25	12			50	8		

INTERFERENCE SEARCHED

Sub	Date	Ex'r
39.07	11/8/82	
27		LAC

SYMBOLS

- V = Rejected
- = Allowed
- (Through numeral) Canceled
- + Restriction requirement
- N Nonelected invention or species
- I Interference
- A Appeal
- O Objected

STATUS

HSB 401485

Signal
panels